

REMARKS

Claims 14 to 19, 21 and 24 to 29 are pending.

Applicants respectfully request reconsideration of the present application in view of this response.

Claims 14 to 18, 21 and 24 to 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Siemens, British Patent 900,774 in view of Yajima, United States Patent No. 4,336,215 and Japanese Patent No. 2001/226,723 to Harada.

Claim 14 is to a thermoelectric component and includes a first element, and a second element, wherein the first element and the second element are in contact with each other in an area of at least one contact point, and wherein at least in one vicinity of the contact point, at least one of the first element and the second element includes a ceramic material, wherein at least in one vicinity of the contact point, the ceramic material includes a filler of one of FeCr and FeCrNi.

Claim 29 is to a method which includes providing a thermoelectric component, the thermoelectric component including a first element and a second element, the first element and the second element arranged in contact with each other in an area of at least one contact point, at least in one vicinity of the contact point, at least one of the first element and the second element including a ceramic material, in which the ceramic material includes a filler of one of FeCr and FeCrNi, and arranging the thermoelectric component in one of a thermocouple configured to one of measure temperature and a Peltier element as one of a thermoelectric heating element and a cooling element.

As regards the obviousness rejections, to reject a claim as obvious under 35 U.S.C. § 103, the prior art must disclose or suggest each claim feature and it must also provide a motivation or suggestion for combining the features in the manner contemplated by the claim. (See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990)). Thus, the “problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the references in order to solve the problem”, Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 679 (Fed. Cir. 1998). It is believed and respectfully submitted that the prior art simply does not address the problems met by the subject matter of any of the rejected claims.

The Office Action admits that the Siemens reference does not describe or even suggest the presence of any filler materials placed in a ceramic material, where the filler material is one of FeCr and FeCrNi. (See Office Action page 3.) Similarly, Siemens does not provide a method describing or using these filler materials.

The secondary Yajima reference does not cure the critical defects of the Siemens reference since the Yajima reference only refers to mixing ceramic materials with semi-inorganic block copolymers, for example oxides such as Al_2O_3 , BeO , MgO , ZrO_2 or SiO_2 , carbides, nitrides, borides, and silicides or ternary or higher compounds of these. (Col. 6, lines 44 to 52.) The Yajima reference refers to additives for adding to ceramic substrates, such as MgO , NiO for Al_2O_3 , CaO and TiO_2 for ZrO_2 , Al_2O_3 and Y_2O_3 for Si_3N_4 , B , Si and C for SiC , Ni and WC for TiC , and ZrO_2 and CrB_2 for ZrB_2 . (Col. 5, lines 11 to 15.) The Yajima reference simply does not disclose or suggest the presence of FeCr and FeCrNi , as provided for in the context of the claims.

The third level Harada reference does not cure the critical defects of the Siemens and Yajima references. The Harada reference refers to a metallic porous body comprised of an alloy having a defined strength and resistance to corrosion. The Harada reference refers to a metallic (not ceramic) body which contains Fe and Cr and has a structure in which CR carbides or FeCr carbides are uniformly dispersed. The Harada reference does not disclose or suggest any relationship to a ceramic material as required in the claims of the present invention. It is respectfully submitted that Harada refers to FeCr and FeCr alloys that make up the metallic porous body, and that do not disclose or suggest FeCr or FeCr alloys used as a filler as required in the claims of the present invention.

As the combination of Siemens, Yajima, and Harada does not disclose or suggest the features of claims 14 and 29, as presented, it is respectfully requested that the rejections of claims 14 and 29, as presented, be withdrawn.

Claims 15 to 18, 21, and 24 to 28 depend from claim 14 and are therefore allowable for at least the same reasons as claim 24.

With respect to paragraph three (3), claims 14 to 19, 21 and 29 were rejected under 35 U.S.C. § 103(a) as unpatentable over Bachman, United States Patent No. 2,981,775 in view of the Yajima reference and the Harada reference.

The Office Action admits on page 5 that the Bachman reference does not disclose a filler material being one of FeCr and FeCrNi . Moreover, the Bachman reference does not describe or even suggest the presence of any filler materials placed in a ceramic material, in which the filler material is one of FeCr and FeCrNi . Similarly, Bachman does not provide a method pertaining to these filler materials.

The secondary Yajima reference, as discussed above, does not cure the critical defects of the Bachman reference, since it only refers to mixing ceramic materials with semi-inorganic block copolymers, for example oxides such as Al_2O_3 , BeO , MgO , ZrO_2 or SiO_2 , carbides, nitrides, borides and silicides.

The third level Harada reference does not cure the critical defects of the Bachman and Yajima references. The Harada reference refers to metallic porous body comprised of an

alloy having a defined strength and resistance to corrosion. The Harada reference refers to metallic (not ceramic) body as containing Fe and Cr and has a structure in which CR carbides or FeCr carbides are uniformly dispersed. The Harada reference does not disclose or suggest any relationship to a ceramic material as required in the presently claimed subject matter. It is also respectfully submitted that Harada refers to FeCr and FeCr alloys that make up the metallic porous body, and that it does not disclose or suggest FeCr or FeCr alloys used as a filler.

The Bachman, Yajima and Harada references simply do not disclose or suggest the presence of FeCr and FeCrNi, as provided for in the context of the claims. It is therefore respectfully requested that the rejections as to claims 14 and 29 be withdrawn.

Claims 15 to 19 and 21 depend from claim 14, and are therefore allowable for the same reasons as claim 14.

Accordingly, claims 14 to 19, 21 and 24 to 29 are allowable.

CONCLUSION

In view of the above, it is believed that the rejections have been obviated, and it is respectfully submitted that claims 14 to 19, 21 and 24 to 29 are allowable. It is therefore respectfully requested that the rejections be reconsidered and withdrawn, and that the present application issue as early as possible.

Respectfully submitted,

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